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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/508,967	04/07/00	WAHLGREN M	45300-59676

000466
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HM11/1211

EXAMINER	
FIELDS, I	

ART UNIT	PAPER NUMBER
1645	

DATE MAILED: 12/11/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Application No.: 09/508967

NOTICE TO COMPLY WITH REQUIREMENTS FOR PATENT APPLICATIONS CONTAINING NUCLEOTIDE SEQUENCE AND/OR AMINO ACID SEQUENCE DISCLOSURES

The nucleotide and/or amino acid sequence disclosure contained in this application does not comply with the requirements for such a disclosure as set forth in 37 C.F.R. 1.821 - 1.825 for the following reason(s)

- [X] 1. This application clearly fails to comply with the requirements of 37 C.F.R. 1.821-1.825. Applicant's attention is directed to these regulations, published at 1114 OG 29, May 15, 1990 and at 55 FR 18230, May 1, 1990.
- [ ] 2. This application does not contain, as a separate part of the disclosure on paper copy, a "Sequence Listing" as required by 37 C.F.R. 1.821(c).
- [X] 3. A copy of the "Sequence Listing" in computer readable form has not been submitted as required by 37 C.F.R. 1.821(e).
- [ ] 4. A copy of the "Sequence Listing" in computer readable form has been submitted. However, the content of the computer readable form does not comply with the requirements of 37 C.F.R. 1.822 and/or 1.823, as indicated on the attached copy of the marked -up "Raw Sequence Listing."
- [ ] 5. The computer readable form that has been filed with this application has been found to be damaged and/or unreadable as indicated on the attached CRF Diskette Problem Report. A Substitute computer readable form must be submitted as required by 37 C.F.R. 1.825(d).
- [ ] 6. The paper copy of the "Sequence Listing" is not the same as the computer readable from of the "Sequence Listing" as required by 37 C.F.R. 1.821(e).
- [ ] 7. Other: _____

Applicant Must Provide:

- [X] An initial or substitute computer readable form (CRF) copy of the "Sequence Listing".
- [ ] An initial or substitute paper copy of the "Sequence Listing", as well as an amendment directing its entry into the specification.
- [X] A statement that the content of the paper and computer readable copies are the same and, where applicable, include no new matter, as required by 37 C.F.R. 1.821(e) or 1.821(f) or 1.821(g) or 1.825(b) or 1.825(d).

For questions regarding compliance to these requirements, please contact:

For Rules Interpretation, call (703) 308-4216
For CRF Submission Help, call (703) 308-4212
For PatentIn software help, call (703) 308-6856

PLEASE RETURN A COPY OF THIS NOTICE WITH YOUR RESPONSE

UNITED STATES DEPARTMENT OF COMMERCE
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SERIAL NUMBER FILING DATE FIRST NAMED APPLICANT
ATTORNEY DOCKET NO.

EXAMINER

ART UNIT PAPER NUMBER
16

DATE MAILED:

Please find below a communication from the EXAMINER in charge of this application

Commissioner of Patents

This application contains sequence disclosures that are encompassed by the definitions for nucleotide and/or amino acid sequences set forth in 37 CFR 1.821(a)(1) and (a)(2). However, this application fails to comply with the requirements of 37 CFR 1.821 through 1.825 for the reason(s) set forth on the attached Notice To Comply With Requirements For Patent Applications Containing Nucleotide Sequence And/Or Amino Acid Sequence Disclosures.

Applicant is given ONE MONTH, or THIRTY DAYS, whichever is longer, from the mailing date of this letter within which to comply with the sequence rules, 37 CFR 1.821 - 1.825. Failure to comply with these requirements will result in ABANDONMENT of the application under 37 CFR 1.821(g). Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a). In no case may an applicant extend the period for reply beyond the SIX MONTH statutory period. Direct the reply to the undersigned. Applicant is requested to return a copy of the attached Notice to Comply with the reply.

DETAILED ACTION

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in response to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-10, drawn to a carbohydrate.

Group II, claim(s) 11-12, drawn to a method of treatment.

Group III, claim(s) 13-17, 21-24, and 27, drawn to a malarial polypeptide.

Group IV, claim(s) 18-20, drawn to DNA.

Group V, claim(s), 25-26, drawn to a method of treatment with an antagonist.

Group VI, claim(s), 28-29, drawn to an antibody.

Group VII, claim(s), 30-32, drawn to treatment with an antibody.

2. The inventions listed as Groups I-IV do not relate to a single general inventive concept under PCT Rule 13.1 since, Page 11 of the specification states that the preferred carbohydrate of the claimed invention is Fucoidan. Uehara *et al.* (*Oyo Toshitsu Kagaku* 1996, Vol. 43(4) pp. 149-153) disclose the carbohydrate, Fucoidan, consequently unity of invention its lacking.

3. Invention I drawn to a carbohydrate, and Invention II drawn to a method of treatment are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using the product (MPEP § 806.05(h)). In the instant case the products as claimed can be used in another process such as raising antibodies.

Invention III drawn to a malaria polypeptide is distinct from Inventions I-II and Inventions IV-VII, since they are products with different structure and biological properties. Further methods of making nucleic acid encoding the protein and the method of making the polypeptide does not require the nucleic acid. For instance, the protein can be made by Merrifield chemical synthesis or affinity chromatography.

Invention IV, drawn to DNA molecule and Inventions I-III and V-VII are distinct since they are products with different structure and biological properties.

Invention V, drawn to a method of treatment with an antagonist is distinct from inventions I-IV and VI-VII since it requires additional biological reagents and parameters to assess the in vivo efficacy of the antagonist.

Invention VI, drawn to an antibody is distinct from Inventions I-V and VII, since it has an inherent affinity, avidity, and specificity that DNA or a simple protein is not capable of expressing.

Invention VII, drawn to treatment with an antibody is distinct from Inventions I-VI since it requires additional biological reagents and parameters to assess the in vivo efficacy of the antibody.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR. 143).

4. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee requirement under 37 CFR 1.17(l).

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Iesha P Fields whose telephone number is (703) 605-1208. The examiner can normally be reached on 7am-3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynette Smith can be reached on (703) 308-3909. The fax phone numbers

for the organization where this application or proceeding is assigned are (703) 305-3014 for regular communications and (703) 308-4242 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.

Iesha Fields

December 5, 2000

ALBERT NAVARRO
PRIMARY PATENT EXAMINER